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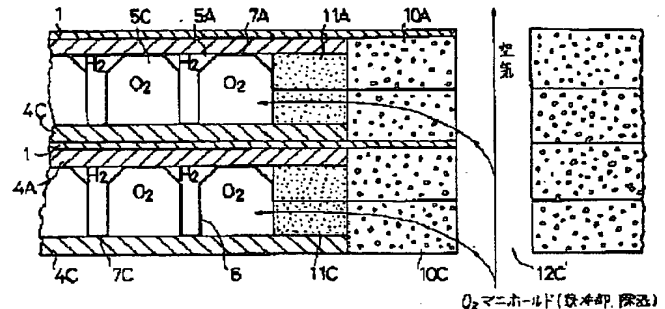
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TITLE : FUEL CELL, ELECTROLYTIC CELL,  
AND ITS COOLING AND  
DEHUMIDIFYING METHOD



**ABSTRACT:** PURPOSE: To allow efficient cooling and efficient dehumidification by providing a separate plate having anode and cathode reaction gas supplying grooves alternately arranged in parallel to each other, the sectional area of the cathode reaction gas supplying groove being larger than the sectional area of the anode reaction gas supplying groove.

CONSTITUTION: A separate plate having anode and cathode reaction gas supplying grooves 5A, 5C alternately juxtaposed on the same plane is laminated between gas diffused electrodes (anode 4A, cathode 4C) through the metal thin plate of an ion exchange membrane 1 to form a fuel cell and an electrolytic cell. The sectional area of the cathode reaction gas supplying groove is set larger than the sectional area of the anode reaction gas supplying groove. The cathode reaction gas as a cooling gas can be carried in a large quantity, and when air is used as the cooling gas, particularly, cathode characteristic can be also improved together with effective cooling and dehumidifying effect. The supplying quantity of the anode reaction gas can be suppressed at necessary minimum, and the device can be also made compacts.

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